Committee on Resources,

Subcommittee on Energy & Mineral Resources

energy - - Rep. Barbara Cubin, Chairman
U.S. House of Representatives, Washington, D.C. 20515-6208 - - (202) 225-9297

Witness Statement

TESTIMONY OF JACK PIGOTT
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ON
CHALLENGES FACING GEOTHERMAL ENERGY DEVELOPMENT ON PUBLIC LANDS
BEFORE THE UNITED STATES HOUSE RESOURCES COMMITTEE, SUBCOMMITTEE ON ENERGY AND MINERALS
THURSDAY, MAY 3, 2001

Madam Chairwoman, members of the Subcommittee, I appreciate the opportunity to testify before you today on the challenges facing the development of geothermal energy on public lands.

By way of introduction, Calpine is the leading independent power producer in the U.S. and the largest producer of geothermal energy in the U.S. Calpine has over 32,000 megawatts (MW) of electric generating capacity either in existing operation, under construction, or announced for development, in 28 states and Canada. Calpine is engaged in the largest construction program in the history of the power industry, with about 14,000 megawatts under construction today.

Calpine is focused on two key technologies: combined-cycle natural gas-fired generation and geothermal steam generation. Gas-fired power plants represent the fastest growing segment of the U.S. power industry, and are the main focus of Calpine's efforts. These efficient, state -of-the-art plants are a low-cost and clean-burning source of electricity for today's competitive market. Geothermal energy is an important niche market for Calpine. Calpine's main geothermal facility is the Geysers, located near Napa Valley, CA, producing about 800 MW of electricity.

I come here today to tell you about Calpine's efforts to develop a known geothermal resource area in Northern California, and particularly to discuss the repeated delays and setbacks that we have experienced regarding that project. I tell you this not because you should have sympathy for Calpine, but because our case is an example of the difficulties that all energy developers face, even as the need for additional generation becomes more and more pressing. Calpine's Fourmile Hill project has been mired in the Federal permitting and appeal process for approximately 5 years, while the separate Telephone Flat project in the same resource area that was being developed by CalEnergy is presently the subject of a multi-million dollar takings and breach of contract lawsuit against the federal government.

My example is all the more ironic because it involves the development of clean, renewable energy. Despite the fact that renewables enjoy the widespread rhetorical support of public officials, this does not in any way immunize the development of individual renewables projects from the gauntlet of delays that plague more traditional generation projects.

The geothermal resource area to which I refer is called Glass Mountain. It lies in the Klamath and Modoc National Forests in northern California, approximately 30 miles south of the Oregon border. Glass Mountain is thought to be one of the largest undeveloped geothermal resources in the United States, with the potential of generating 1000 MW, more than is currently produced at the Geysers, and enough to meet the electricity needs of a city the size of San Francisco or Seattle.

In the early 1980s, the Bureau of Land Management (BLM) and the U.S. Forest Service actively sought the investment of private capital in developing the Glass Mountain geothermal resource by soliciting competitive bids to lease acreage for development. Specifically, the lessee was to acquire the right to develop and commercialize the underlying geothermal resource. This was done under the authority of the Geothermal Steam Act, which encourages the development of geothermal energy on federal lands. A historical timeline of the leasing and permitting activities for Glass Mountain is attached to this testimony.

Freeport McMoran was the successful bidder, and entered into geothermal leases covering over 20,000 acres. Prior to issuing the leases, the BLM and the Forest Service conducted an Environmental Assessment as required under the National Environmental Policy Act (NEPA). In 1994, Calpine acquired Freeport McMoran's lease position.

In 1991, the Bonneville Power Administration (BPA) took its own step toward encouraging the development of geothermal resources, effectively supplementing the encouragement offered by the Forest Service and BLM. BPA entered into memoranda of understanding and other agreements that provided incentives for Calpine to proceed with its development efforts. BPA's goal was to ensure that power from Glass Mountain would be available to serve customers in Northern California and the Northwest.

In short, Calpine was encouraged to develop a geothermal power project at Glass Mountain by three agencies of the U.S. government: the BLM, the Forest Service, and BPA.

Fourmile Hill Geothermal Project NEPA Process

Through 1994 and 1995, Calpine collected baseline data, and in 1996, Calpine submitted to the BLM and Forest Service an application to develop the 49.9 MW Fourmile Hill project on its geothermal leases. This initiated a review under NEPA and its California counterpart (CEQA) that ultimately became a prolonged process that cost Calpine more than $3 million.

In addition to the usual elements of a NEPA/CEQA review, Calpine funded an extensive ethnographic study of the customs and historical uses of the Glass Mountain area by the region's Native American tribes. The BLM and Forest Service strongly recommended conducting the ethnographic study as a mitigation measure and goodwill gesture to the tribes. During the NEPA process, the lead agencies and/or the ethnographer met and consulted with the affected tribes at least 30 times.

The final Environmental Impact Statement (EIS) for the Fourmile Hill project was released on October 2, 1998. The EIS was extensive and thorough, much more so than would typically be the case for a 49.9 MW project, having taken almost 2.5 years to prepare. The EIS found that the project would have but one adverse effect that could not be mitigated. That adverse effect was on Native American traditional spiritual values with respect to noise and landscape views, and was based on representations of the tribes during preparation of the ethnographic study. The essence of the adverse effect finding is that the geothermal development would degrade the spiritual significance of Glass Mountain area as a sacred site.

In order to address the Native American concerns regarding the project, Calpine met with the three tribes identified in the ethnographic study as having historically used the Glass Mountain area. We ultimately entered into agreements with two of the tribes and part of the third tribe. However, the remaining bands of the third tribe continue to be opposed to the project.

It should be pointed out that the Glass Mountain area already contains paved roads, a campground, cabins, a boat ramp, motor boats, a snowmobile park, and an active pumice mine. At one time, the entire area was logged. Furthermore, the area has very few archaeological sites, due largely to the fact that it is at a high elevation and under as much as 20 feet of snow for 6 months of the year.

Consultations Between The Lead Agencies And SHPO

As a result of the adverse effect determination, the BLM and the Forest Service decided to consult with the California State Historic Preservation Office (SHPO) and the federal Advisory Council on Historic Preservation prior to issuing a Record of Decision (ROD) on Calpine's project. Unfortunately, SHPO and the Advisory Council had no incentive to close consultations in a timely fashion, and BLM and Forest Service did little to push the process along.

In a letter of February 26, 1999 to Senator Dianne Feinstein, the Forest Service estimated that the consultations would be completed and the ROD issued by mid-April 1999. The agencies missed that target date, and then went on to promise a series of later dates, only to fail to meet each of them. Whenever we asked the Forest Service and the BLM for a target date, the answer was typically "in two months," until we joked that the agencies used a rolling two-month deadline. Finally, after considerable pressure from members of Congress and others, the agencies issued their ROD approving the project on May 31, 2000, almost 20 months after completion of the final EIS.

The ROD focused on the volcanic "caldera," a feature encompassing about twenty-four square miles in the Glass Mountain known geothermal resource area, which was deemed the most sensitive area from a traditional cultural values standpoint, but which also contains the majority of the prospective geothermal resource. Calpine's Fourmile Hill project was approved because it happens to lie outside of the caldera. A separate project that was also proceeding through the permitting process, the CalEnergy Telephone Flat geothermal project, was denied because it was located within the caldera. Furthermore, the BLM imposed a moratorium on any further geothermal development in the entire Glass Mountain area for a minimum of five years, excepting only the Fourmile Hill 49.9 MW project.

The agencies' failure to issue the ROD in a timely manner seems to have been the result of at least two factors. First, the agencies seemed uncertain as to how to handle its consultation with SHPO and the Advisory Council. Second, the Forest Service specifically delayed making a decision while it reviewed its policies with respect to geothermal resource development. In Calpine's view, such a review should have occurred before the leases were issued, not after a lessee has invested millions of dollars in the permitting process.

Finally, the moratorium by the BLM and Forest Service on further development at Glass Mountain except for the Fourmile Hill project is entirely inconsistent with the existing lease rights, and with prior decisions and actions by these agencies that authorized and encouraged geothermal development in the area.

The Appeal Process

After the ROD approving Calpine's project was issued, project opponents predictably appealed. The Forest Service promptly ruled on the appeal of its decision on September 1, 2000 denying the appeal. However, the Interior Board of Land Appeals (IBLA), which rules on appeals of BLM decisions, presently has an 18-month backlog of cases. Project opponents requested a stay of ground moving activities pending the outcome of the appeal, and the IBLA granted the stay.

Therefore, it appears that the permitting process for this project will take a total of 6 years or more. Furthermore, if the IBLA ultimately denies the appeals, the project opponents have the option of seeking time-consuming review in federal court.

The following are some statistics that I wanted to bring to your attention:

- The permitting process has taken 5 years, and is likely to consume 6 years or more;
- The Final EIS for the Fourmile Hill project provides for over 400 different mitigation measures that the project must comply with; and
- The administrative record for the permitting process takes up 90 bound volumes.

In closing, let me make an observation and a few recommendations:

First, the observation. Had the permitting process moved expeditiously, both the Fourmile Hill project and the Telephone Flat project would be entering into commercial operation this year, providing 100 MW of low cost, clean renewable power to address the western states' electricity crisis. However, if Calpine knew in 1994 what it knows now, it is safe to say that it never would have invested its time and capital in the Fourmile Hill project. Similarly, unless the situation changes, Calpine is unlikely to embark on a similar project ever again. This should concern this Subcommittee because many of the geothermal resources in the United States are located on federal land. As long as the federal permitting process remains as time-consuming and costly as what Calpine has experienced, private companies will be severely discouraged from developing these energy resources.

My first recommendation is that resource agencies such as the BLM and Forest Service need to understand that their protracted review processes discourage the very sort of development that Congress intended in the Geothermal Steam Act. We are certainly not recommending that such reviews be done hastily or shoddily, but they must be done expeditiously if we are to increase production of much-needed electricity from geothermal and other energy resources located on Federal land. Timeframes and milestones should be established for all of the Federal and State agencies involved to complete environmental reviews and make decisions.

Second, Calpine recommends that Congress take steps to eliminate the IBLA appeal backlog as soon as possible. There is no logical reason why the Forest Service can decide appeals in a matter of weeks, while the IBLA takes 18 months or more.

Finally, Congress should ask the new Administration to take steps to end the discouragement of geothermal development on federal lands. There is no need or other basis for the current five year moratorium at Glass Mountain. We suggest that the Secretaries and, if necessary, Congress act broadly to direct renewed support for environmentally sound production of geothermal energy at Glass Mountain and other areas, facilitated by timely and fair review by all involved agencies. I would be pleased to answer any questions.

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